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CLAIMS

1. A seal ring which seals operating oil hermetically and is attached to an annular seal ring groove provided on an outer circumference of a shaft member,
5 the seal ring comprising:

fluororesin;

modified fluororesin formed by being irradiated with an ionizing radiation in a range from 1 kGy to 10 MGy inclusive in a state of being heated up to a melting point thereof or higher under an inert gas atmosphere with an oxygen
10 partial pressure of 1.33 kPa or less; and

synthetic resin having a surface energy ranging from $+0 \text{ N/cm}$ to $20 \times 10^{-5} \text{ N/cm}$ inclusive of that of the operating oil,

wherein the seal ring comprises an inner ring circumferential surface facing an inside thereof in a radius direction, an outer ring circumferential surface
15 facing an outside thereof in the radius direction, and a pair of side ring surfaces facing both sides thereof in an axial direction, and

when oil pressure is applied to the seal ring, the outer ring circumferential surface is pressed against an inner circumferential surface of a housing, and one of the side ring surfaces is pressed against a side surface of the
20 seal ring groove, thus retaining the oil pressure.

2. A seal ring according to claim 1,

wherein a ratio of the modified fluororesin to a total amount of the fluororesin and the modified fluororesin ranges from 5 to 50 % by volume
25 inclusive.

3. A seal ring according to claim 1,

wherein a compounding ratio of the synthetic resin to a material constituting the seal ring ranges from 5 to 50 % by volume inclusive.

4. A seal ring according to claim 1,
wherein the synthetic resin is polyamideimide.
5. A seal ring according to claim 4,
5 wherein the polyamideimide is used as powder with a mean particle diameter ranging from 2 μm to 150 μm inclusive.
6. A seal ring according to claim 1,
wherein the seal ring is used for a hydraulic seal for relatively rotating
10 portions in an automatic transmission for a vehicle.
7. A hydraulic seal device, comprising:
a shaft member;
a housing which houses the shaft member; and
15 a seal ring which seals operating oil hermetically and is attached to an annular seal ring groove provided on an outer circumference of the shaft member,
the seal ring, comprising:
fluororesin;
modified fluororesin formed by being irradiated with an ionizing
20 radiation in a range from 1 kGy to 10 MGy inclusive in a state of being heated up to a melting point thereof or higher under an inert gas atmosphere with an oxygen partial pressure of 1.33 kPa or less; and
synthetic resin having a surface energy ranging from +0 N/cm to 20×10^{-5} N/cm inclusive of that of the operating oil,
25 wherein the seal ring comprises an inner ring circumferential surface facing an inside thereof in a radius direction, an outer ring circumferential surface facing an outside thereof in the radius direction, and a pair of side ring surfaces facing both sides thereof in an axial direction, and when oil pressure is applied to the seal ring, the outer ring circumferential surface is pressed against an inner
30 circumferential surface of the housing, and one of the side ring surfaces is pressed

against a side surface of the seal ring groove, thus retaining the oil pressure, and

the seal ring slidably contacts any of the side surface of the seal ring groove of the shaft member which is nonferrous metal and the inner circumferential surface of the housing which is non ferrous metal.